

THE AIR ASSAULT DIVISION. IS IT A VIABLE STRATEGIC CONTINGENCY FORCE FOR THE TWENTY-FIRST CENTURY?

**A MONOGRAPH
BY
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Infantry**



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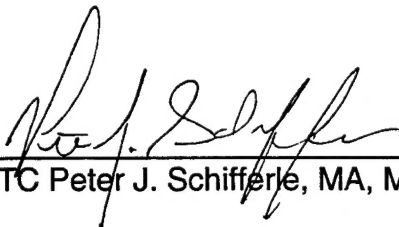
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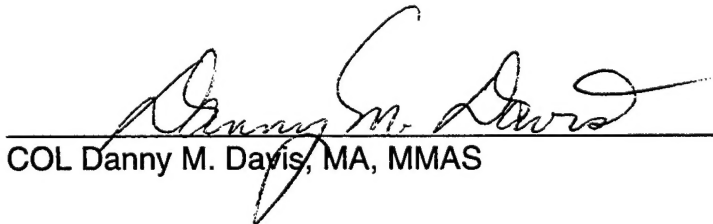
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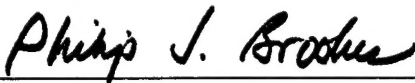
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ABSTRACT

THE AIR ASSAULT DIVISION. IS IT A VIABLE STRATEGIC CONTINGENCY FORCE FOR THE TWENTY-FIRST CENTURY? By Major Marshall A. Hagen, USA, 56 pages.

The post Cold-War era has opened the door for the United States to become involved in a myriad of military operations in the execution of our National Security Strategy. As U.S. Army forces continue to conduct a variety of peace support operations and prepare to fight major regional contingency operations, our contingency force must evolve into a fighting force that is operationally capable, strategically deployable, and sustainable. This monograph examines the validity of the air assault division as a strategic contingency force in the year 2010.

To analyze the air assault division as a strategic contingency force, this monograph addresses the role of the air assault division, specifically, its mission/purpose, strengths and limitations. It examines the division's operational capabilities, strategic deployability, and the logistics required to conduct contingency operations. All analyses reflect the enhancements of force modernization and projected strategic lift inventories of the year 2010.

This monograph concludes that the air assault division will be a viable contingency force in the year 2010. It has the operational reach to strike deep targets to shape operations at the tactical, operational and strategic levels of war. It has a rapid deployment capability that is task organized with sufficient firepower and mobility, so that from an ISB it can conduct forced entry operations or exploit tactical success. It is not a force limited by terrain or obstacles, and has the versatility and lethality to provide a credible SASO force capable of rapid transition into combat operations should deterrence efforts fail. It is a force limited by its ability to strategically deploy, mass combat power, and sustainment of class III, V, and IX supplies. However, these limitations are continuing to decline in significance as the U.S. military continues to improve the strategic deployment capabilities of the C-17, C-5, and FSS fleets, continued modernization of the helicopter fleet, and by incorporating the RML innovations in the logistics system.

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Chapter 1: Introduction.

Critical to our nation's ability to shape the international environment and respond to the full spectrum of crises, today and tomorrow, are technologies, capabilities and requirements to enable the continued worldwide application of U.S. national power.¹

National Security Strategy of the United States.

May 1997.

The post Cold-War era has opened the door for the United States to become involved in a myriad of military operations in the execution of our National Security Strategy. As U.S. Army forces continue to conduct a variety of peace support operations and prepare to fight major regional contingencies (MRC) operations, our contingency force must evolve into fighting forces that are strategically deployable, sustainable and versatile. Basically, these forces will be required to capitalize on the fundamental elements of the Army's operational concept -- seize the initiative, maintain momentum, and exploit success.²

Future contingency operations will require a force not only capable of deploying as a fighting force, but able to sustain itself for extended operations, be strategically, operationally as well as tactically mobile, and equipped with the lethality to defeat a wide

variety of threats. The 82nd Airborne Division is the Army's main contingency force. It is strategically rapid deployable, but lacks operational and tactical mobility, and lethality against armor to maintain momentum or exploit success in a contingency operation. This is especially true with the deactivation of its light armor battalion in 1996.

Our forces must be able to seize and maintain the momentum of operations rapidly to meet multiple demands in an uncertain and complex strategic environment.³

National Military Strategy of the United States.

September 1997.

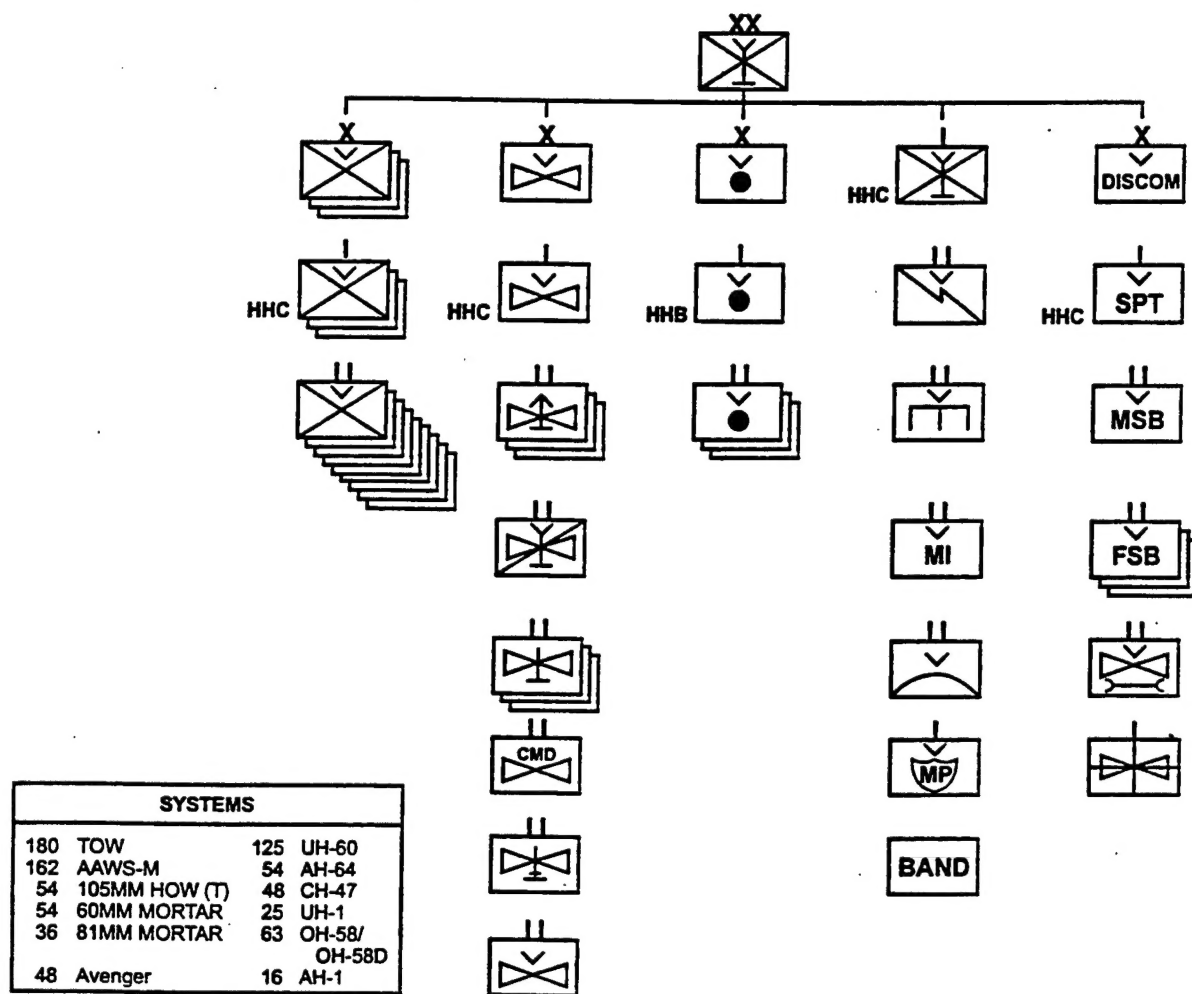
Does the U.S. Army currently have a contingency force suited for all contingencies? Obviously the answer is no, but all contingency divisions, the 82nd Airborne, the 101st Airborne (Air Assault), the 25th Infantry (Light), and the 10th Mountain (Light) come close to filling the bill. In terms of strategic deployment, and operational and tactical mobility, what one has the other needs and vice versa. The 82nd Airborne, 25th Infantry (Light) and 10th Mountain Divisions have great strategic reach, but limited operational or tactical mobility; the 101st Airborne (Air Assault) has unique tactical mobility but is difficult to package for distant employment.⁴ When asked why he did not request the 101st Airborne (Air Assault) for Operation Just Cause, General Maxwell Thurman, CINCSOUTHCOCOM, replied, "I couldn't wait the 150 hours it would have taken them to unpack, once they

arrived in Panama from the United States.”⁵ Panama was too far for the 101st to mount an assault landing directly, and early movement of the division to a staging area might have disclosed the imminence of the attack. Very likely, for this reason the division was not used in Operation Urgent Fury in Grenada. The assault forces had to be in combat configuration immediately upon landing in the area of operations.⁶

The 101st Airborne Division (Air Assault) is a unique organization among the armies of the world. Its maneuver elements consist of nine specially trained infantry battalions, three attack helicopter squadrons and an air cavalry squadron. In addition, it has a complement of three assault helicopter battalions, UH-60 Blackhawk equipped, that provide the capability of lifting the assault elements of three of the infantry battalions simultaneously, or one brigade task force. With a maximum range with full mission combat load of 330 nautical miles, the Blackhawk affords the organization extraordinary tactical mobility.⁷ (See Figure 1-1).

Since its inception into the U.S. Army in 1963, the air assault concept has evolved with the development of new technologies, the need for more lethality on the battlefield, the changing capabilities of our enemies and the diversity of the terrain we plan to fight them in. Yet the air assault division has not played a significant role in recent contingency operations, with the exception of Operation Desert Shield in August of 1990. Why is this? What aspects of the air assault division are keeping it from participating in strategic contingency operations, and how can the U.S. Army configure the air assault division into a global, efficient, rapid deployment contingency force that will meet the challenges of the twenty-first century?

Figure 1-1. Air Assault Division.



Source: FM 71-100⁸.

The Methodology of this study is four fold. First, it examines the mission of the air assault force, and how it has evolved into the fighting force it is today. Second, the study analyzes the air assault division's strategic deployment capabilities, specifically, strategic

air transport requirements, the division's capability to self-deploy its aviation assets, and airlift required to deploy the division's ready brigade into a contingency operation. Third is the study of the air assault division's operational capabilities, and its vulnerabilities in current and future contingency operations. Force modernization is studied to determine solutions to vulnerabilities and identifies new capabilities which will improve the effectiveness of the air assault division as a strategic contingency force. Fourth is the analysis of sustaining the operational effectiveness of the air assault division logistically in a contingency operation; specifically addressed are the classes of supply critical for air assault combat operations, and logistical innovations that have been adopted by the force, or will be by the year 2010. Additionally, these chapters will apply the advances technology has contributed to strategic agility and power projection of the air assault contingency force.

This study concludes with findings that will delineate the role of the air assault division as a strategic contingency force today as well as to the year 2010. Finally, this study provides recommendations for the employment of the air assault division as a strategic contingency force, recommendations capitalizing on the unit's strengths and identify shortcomings as a future strategic contingency force.

Chapter 2: Role of the Air Assault Division.

“Where is the prince who could so afford to cover his country with troops for its defense as that 10,000 men descending from the clouds might not in many places do an infinite deal of mischief?”⁹

Benjamin Franklin.

“The Air Force and armor were the thunder of Desert Storm, while the 101st was the lightning.”¹⁰

General H. Norman Schwarzkopf.

Evolution of the Air Assault Division.

Air mobility as a concept has developed through the battles of the Second World War and the conflicts that have followed. Until the arrival of the helicopter, air assaults were conducted using parachutes and gliders, restricting the maneuver to a one-shot affair in which the attacking troops descended to seize a key location and then defended themselves as best they could until help arrived. The paratrooper motto, “strike and hold,” indicates this basic tactical immobility. With the perfection of helicopters the tactic

has changed from "strike and hold" to "strike and strike and strike," allowing a continuous series of airmobile thrusts.¹¹

In 1957, Lieutenant General James M. Gavin, who won early fame and swift promotion with the 82nd Airborne Division in World War II, was chief of research and development for the Army. His vision of the new fighting force, included something that he described in a seminal article as "Cavalry—And I Don't Mean Horses." It centered on the helicopter, that ungainly bumblebee, which made a very limited combat debut in Korea, principally hauling wounded to the rear two at a time.¹²

With the evolution of the helicopter as a reliable troop transport, the Army began testing the airmobile concept and the feasibility of an airmobile force in the early 1960's. Secretary of Defense Robert McNamara appointed General Howze to form a board for the study of airmobility and the use of helicopters. The Howze Board recommended a greatly expanded role for helicopters in the Army. It recommended the creation of airmobile divisions, which would use helicopters to transport infantry and artillery.¹³ The Howze Board recommendations led directly to the formulation of the Eleventh Air Assault Division commanded by Brigadier General Harry Kinnard. This experimental division participated in field exercises and war games in the United States and also sent six airmobile companies to Vietnam in 1964. The officers from this division, including Kinnard, provided the nucleus of the First Cavalry Division that was formed and sent into combat in Vietnam in 1965.¹⁴

The airmobile division of the Vietnam era provided the U.S. Army the operational foundation, experience, and tactics for today's air assault operations.¹⁵ Despite the many frustrations that dogged the Army in Southeast Asia, airmobile operations clearly showed

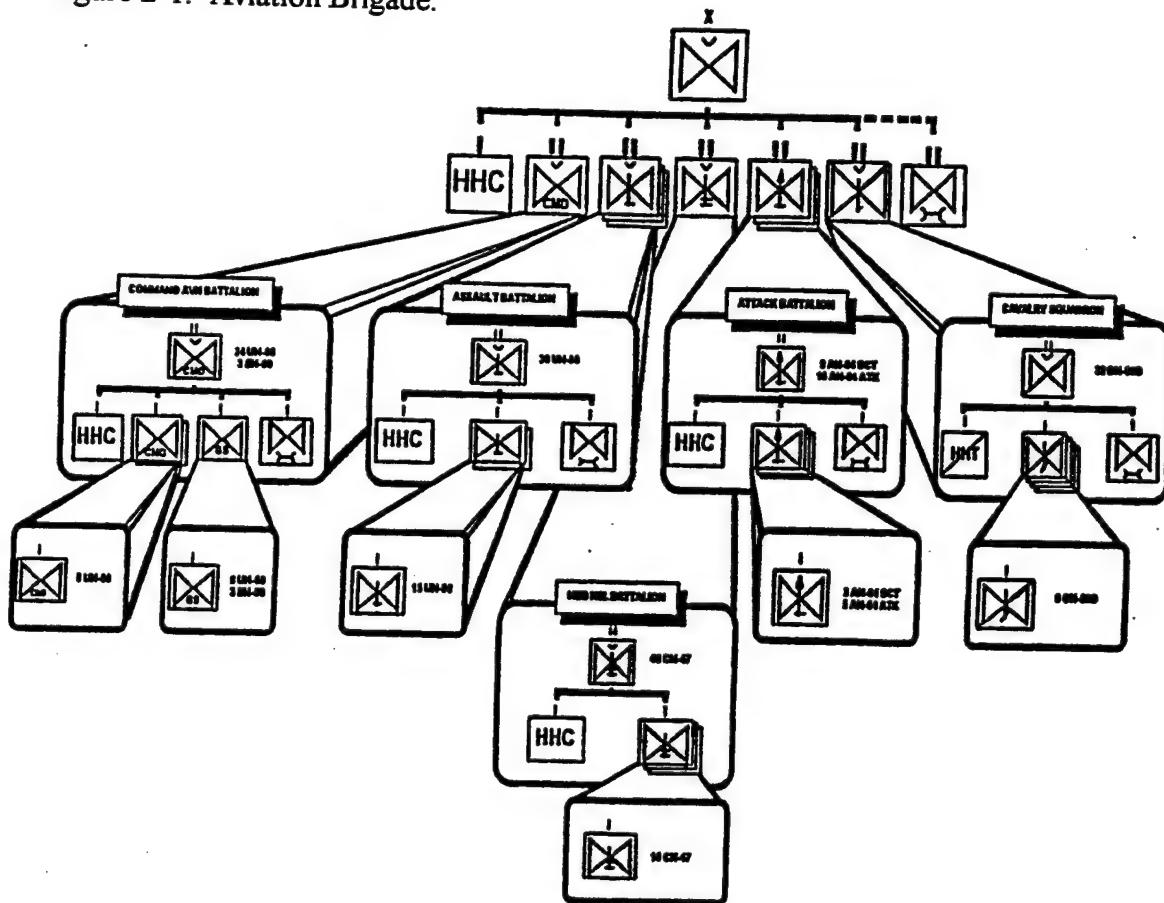
great promise. However, the nature of the Vietnam War did not demonstrate the full potential of airmobility. The goals in Vietnam were almost exclusively tactical, gaining and maintaining contact. Airmobile forces never struck deep into the enemy's unprotected vitals.¹⁶ After Vietnam, technology and doctrine evolved toward contemporary air assault operations. A second generation of Army aircraft offered the right tools: squad carrying UH-60 Blackhawks, medium lift CH-47D Chinooks, and the attack helicopter (AH)-64 Apache gunships, all capable of flying and fighting at night.¹⁷

Purpose/Mission of the Air Assault Division.

The air assault division conducts rapid-tempo operations over extended ranges. It combines operational mobility with an extremely high degree of tactical mobility within its area of operations (AO), and attacks the enemy deep, fast, and often over extended distances and terrain obstacles.¹⁸ The air assault division is powerful, extremely flexible and responsive to various situations because of the integration of army aviation, infantry, and artillery units into a combined arms team, air assault task force (AATF). The aviation brigade provides the division with unique capabilities and can project combat power throughout the entire framework of the battlefield because of the combination of utility and medium lift helicopter organization, attack aviation, and an air cavalry squadron. The primary mission of the air assault division aviation brigade (See Figure 2-1) is to deploy worldwide on short notice, plan, coordinate, and execute aviation operations as an integrated element of an air assault combined arms team.¹⁹

Air assault operations provide the contingency force commander with a decisive combat capability to mass his unit's combat power at the decisive time and place on the battlefield.²⁰ Air assault operations employ the firepower, mobility, and total integration of helicopter assets, maneuver on the battlefield under the control of the AATF commander to engage and destroy enemy forces or seize and hold key terrain. The number of aircraft involved in the operation does not define the air assault. For example, an assault helicopter battalion will conduct an air assault when it transports an infantry battalion to seize an objective.²¹

Figure 2-1. Aviation Brigade.



Source: Army Aviation Operations. FM 1-100.²²

Air assault operations are not merely movements of soldiers, weapons, and material by Army aviation units. They are deliberate, precisely planned, and vigorously executed combat operations designed to allow friendly forces to strike over extended distances and terrain barriers to attack the enemy when and where it is most vulnerable.²³ Once deployed on the ground, air assault infantry battalions fight like battalions in other infantry divisions; however, their normal task organization of organic aviation results in greater combat power, permits rapid aerial redeployment, and provides the operational commander with numerous possible task organization mixes as reflected by METT-T.²⁴

Chapter 3: Operational Capabilities.

To meet today's military challenges, American ground forces must arrive rapidly from stateside bases, must be prepared to enter by force, and must be ready to exploit violently following the shock of the initial assault. These three capabilities form the essence of power projection.²⁵ Of the Army's current contingency and CONUS based forces, only one division meets all three requirements of power projection; the 101st Airborne Division (Air Assault). Refer to Figure 3-1.

These key capabilities of the air assault division permit it to execute many of our current contingency plans.²⁶ As a contingency force, the air assault division must be prepared to conduct combat, and stability and support operations (SASO) worldwide. With the rapid deployment capability and the ability to operate in austere environments, the aviation assets of the air assault division make it a viable SASO force. As a CS and CSS enabler for SASO, aviation assets can reach remote areas, deliver food and medical supplies, provide emergency communications, conduct aeromedical evacuation, extract disaster victims, and provide reconnaissance and security, combat projection, and facilitate the rapid movement of personnel and equipment, administratively and tactically.²⁷ The very presence of aviation makes it a highly visible deterrent force that can rapidly transition from peace to conflict.²⁸

As an organization that capitalizes on the strengths of ground maneuver forces combined with aviation, an air assault force is a credible deterrence to belligerents, is capable of conducting immediate combat operations should deterrence fail, and projects

the determination and resolve of the U.S. government and U.S. armed forces in maintaining U.S. interests.

Figure 3-1.

U.S ARMY POWER PROJECTION FORCE

	Rapid Deployment	Forced Entry	Rapid Exploitation
XVII Airborne Corps			
10 th Mountain Division Fort Drum, NY.	YES	NO	NO
82 nd Airborne Division Fort Bragg, NC.	YES	YES	NO
101 st Airborne Division (Air Assault) Fort Campbell, KY.	YES	YES	YES
3 rd Infantry Division (Mech) Fort Benning and Stewart, GA.	YES/NO (IRC/DIV)	NO	YES
III Corps (Mid-Intensity War)			
4 th Infantry Division (Mech) Fort Hood, TX.	NO	NO	YES
1 st Cavalry Division Fort Hood, TX.	NO	NO	YES

Note: One balanced tank/mechanized infantry battalion task force would be assigned to each XVIII Airborne Corps division.

Source: Parameters.²⁹

Forced Entry/Exploitation Capabilities.

By design of its Modified, Table of Organization and Equipment (MTOE), the air assault division has unique strategic contingency capabilities over light and airborne MTOEs that allow it the ability to conduct a forced entry operation and exploit tactical success with its organic assets. The division's organic lift and attack aviation battalions give it operational depth with the capability to air assault one brigade task force a

maximum distance of 150 kilometers every 24 hours, or conduct deep attacks, along with or separate from a brigade air assault, with three attack aviation battalions out to 150 kilometers every 24 hours.³⁰

The air assault division is the only division in the U.S. Army with its own organic medium lift battalion with 48 CH-47Ds. Normally, this is a corps asset. Figure 3-2 depicts the task organization of the air assault division ready force (DRF) and DRB. Notable in Figure 3-2 is the task organization of the DRF and DRB forces. Both have significant mobility and firepower to conduct a forced entry contingency operation, and exploit success through air mobility or attack air assets.

Figure 3-2.

DIVISION FORCE PACKAGING

DRF-1(Battalion Task Force, 1350 Pers)				DRB-1(Brigade Task Force, 4060 Pers)			
TOWS	20	STINGER Tms	5	TOWS	20	STINGER Tms	15
DRAGONS	18	AVENGERs	3	DRAGONS	54	AVENGERs	9
60MM MORTARS	6	LSDIS	1	60 MM MORTARS	18	AH-64A	24
81MM MORTARS	4	AH-64A	8	81 MM MORTARS	12	UH-60A/L	33
105MM HOWITZER	6	UH-60A/L	14	105MM HOWITZER	18	CH-47D	16
CH-47D	8						

Source: Division Capabilities Guide.³¹

The lethality of the air assault division is not represented solely by its three AH-64A attack aviation battalions, but rather in an air assault commander's ability to plan, coordinate and mass the effects of the task force as a combined arms team. Employment

of the division's attack aviation offers several options in support of contingency operations. It can be task organized and deployed with a DRB's force package or employed as a "pure" asset to support divisional tactical objectives, or theater operational or strategic objectives. In essence this is a force which is rapidly deployable, with the mobility and endurance to ensure dominant maneuver peculiar to a contingency environment.

The AH-64's firepower originates with its capability to fire 16 Hellfire missiles or 76 2.75-inch rockets and 1,200 rounds of 30-mm ammunition. With a full load, its operational range is 280 miles, and with attachable fuel pods, the AH-64's operational distance can be expanded to 1,100 miles.³² These capabilities extend the air assault division's lethality into the operational and strategic arena, and support the self-deployment option if that is required to support a contingency operation.

In summary, the air assault division is a viable force projection option capable of conducting strategic contingency operations. It has the operational reach to strike deep targets to shape operations at the tactical, operational and strategic levels. It has a rapid deployment capability that is task organized with sufficient firepower and mobility, so that from an ISB it can conduct forced entry operations and exploit tactical success. It is not a force limited by terrain or obstacles, and has the versatility and lethality to provide a credible SASO force capable of rapid transition into combat operations should deterrence efforts fail.

Strategic Contingency Operations

Contingency operations as defined in FM 101-5-1, Operational Terms and Graphics, is an emergency involving military forces caused by natural disasters, terrorists, subversives, or by required military operations. Due to uncertainty of the situation, contingencies require plans, rapid response, and special procedures to ensure the safety and readiness of personnel, installations, and equipment.³³ Contingency operations can be viewed as operations conducted at all levels of war, but most commanders today view contingency operations at the operational or tactical level of war. In reality contingency operations are shifting more and more into the strategic level of war arena.

Recent and current operations point to a blurring of strategic, operational and tactical levels of war. The distinctions between these levels began to merge as far back as World War II, in part due to the increasing depth of what were previously tactical operations.³⁴ As contingency forces continue to expand on the improved capabilities that are provided through force modernization, more lower echelon units will find themselves in situations that hold strategic implications.

Because of our expanding operational depth, missions that were previously considered tactical now hold strategic implications. Operations conducted at tactical levels, due to the depth they can achieve and the realities of the information age, now regularly bleed over into the operational and strategic arenas. Information and our operational depth capabilities are blurring these lines to the point where the levels of war can be seen as concentric or interlocking spheres of responsibility.³⁵ See Figure 3-3.

Of significance to the air assault force is the growing spectrum of potential contingency operations they may be committed to in the twenty-first century. Future strategic challenges may include asymmetrical conflicts (as the first world confronts threats in the second and third), terrorism with no definable state roots, and ethnic, religion, and separatist movements. They may involve a proliferation of weapons of mass destruction beyond state controls.³⁶

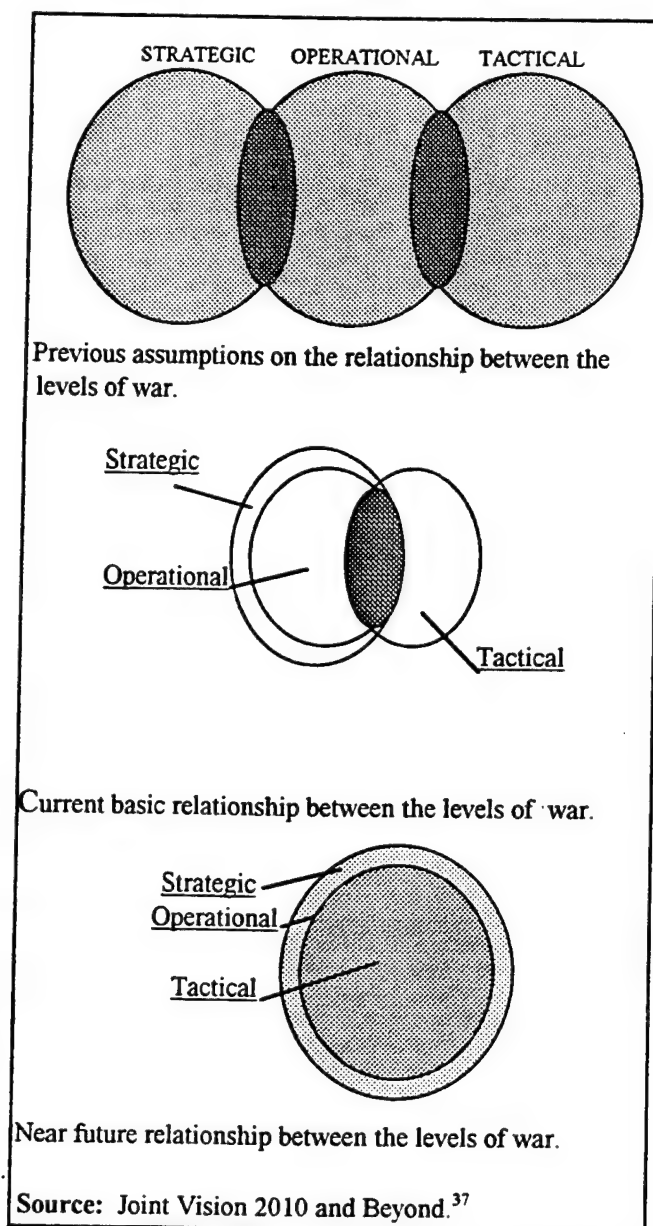
As merging levels of war will continue to refine where/when tactical units are employed, it will be the rapid deployment units with the most versatility and flexibility that will be called to conduct the operations.

However, all contingency forces will be challenged by the added operational depth inherent with most operations at the strategic level of war.

Limitations of Air Assault and Aviation Forces.

With the division's reliance on the helicopter as its prime mover and extensive source of firepower, there are numerous limitations and vulnerabilities that require detailed

Figure 3-3: Merging Levels of War.



planning and coordination before they can be employed at the strategic or operational levels of war. While weather and the geographical environment restrict all air assault operations, strategic contingency operations possess additional unique limitations and vulnerabilities.

Once committed, air assault infantry is limited by the same constraints which are characteristic of all U.S. Army dismounted infantry forces: limited ground mobility, and vulnerability to NBC and artillery attacks. With the exception of additional AH-64 battalions in its aviation brigade, the division possesses the same anti-armor killing capability as an airborne infantry force. Additionally, the division must sustain a significant fuel and ammunition consumption rate, and expend substantial internal assets, i.e., attack aviation and field artillery, to defeat or suppress enemy ADA in support of air assault, or deep attack operations.

Force Modernization Solutions.

For the purpose of this monograph, force modernization is limited in scope to the study of Army aviation technology and the special equipment that directly affects the air assault division's capabilities to extend its operational reach and enhances its effectiveness as a strategic contingency force. The scope of time will be limited to those technological advances that will be fielded by the year 2010.

Developing and fielding modern, next-generation systems and technologies, along with supporting doctrine, training and operational concepts, will be key to fielding a strong, capable Joint Force in the next century. Our modernization efforts hinge on Joint Vision 2010, our operational template for future joint operations. JV 2010 continues to refine

our operational concepts and as we transition into the implementation of "operationalization" phase.³⁸ Force modernization for the U.S. Army helicopter fleet and advances to strategic airlift capabilities produced by the C-17 Globemaster III are an essential portion of the process that continues to improve the capabilities of the air assault force.

Enhancing the capabilities of the air assault force remains a continuous ordeal. In 1944, a lightly armed U.S. Army airborne division, about 6,500 soldiers, would make about one combat parachute and glider assault every three months.³⁹ Today, an air assault division can project a brigade combat team, about 3,500 soldiers, and a three-battalion attack helicopter brigade 90 to 100 miles into harm's way every night.⁴⁰ Enhancing capabilities is the main effort of force modernization.

Despite a tight budget and the fact that nearly every Army aviation aircraft is due for modernization, the Army helicopter modernization programs are advancing. The first Longbow Apaches have been officially delivered, and series production is under way. The Kiowa Warrior remanufacturing line is incorporating changes developed for the Task Force XXI Advanced Warfighting Experiment. The first production UH-60Q Black Hawk medivac helicopter, now in flight test, opens one possible pathway to a Blackhawk mid-life upgrade. Meanwhile, the improved Chinook helicopter is near a milestone II decision for engineering, manufacturing and development (EMD).⁴¹

Looking beyond our current fleet, two aircraft will have a significant impact on the capabilities of air assault forces and Army aviation in general. Those are the RAH-66 Comanche scout-attack helicopter scheduled for fielding in 2006, and the Chinook remanufacturing program or improved cargo helicopter (ICH) which will replace the

CH-47Ds beginning March 2003.⁴²

Force Modernization and its Effects on Operational Reach.

Operational reach as defined by FM 100-5, Operations, is the distance and duration in which a force can successfully employ military capabilities. It reflects the operating ranges and endurance of combat, combat support, and combat service support capabilities, and is influenced not only by the relative combat power of opposing forces but also by CSS capabilities; the length, efficiency, and security of their lines of communication; and the effectiveness of the distribution system that operates along those lines of communication.⁴³

The key element of this definition is the successful employment of military capabilities. The US military's operational reach is irrelevant if our forces arrive in theater piecemeal, or are incapable of performing their assigned mission. A classic example of operational reach with insufficient combat capabilities for a given situation occurred in August of 1990 with the start of Operation Desert Shield. Within a few weeks after Saddam Hussein invaded Kuwait, the division ready brigade (DRB) of the 82nd Airborne Division was on the ground in Saudi Arabia to defend President Bush's "line in the sand." The lightly armed airborne force was not equipped to defeat a significant armor force had Hussein decided to attack into Saudi Arabia. Several weeks passed before heavy forces from the 24th Infantry Division closed into theater to augment ground forces with M1 tanks, Bradleys and howitzers.⁴⁴

Today's helicopters give the Army speed, range, firepower and flexibility on a linear battlefield. With modernization, they will gain digital connectivity for the nonlinear

conflicts of the future. Instead of gathering forces neatly arrayed along a forward line of troops, the Army on the nonlinear battlefield will assemble widely dispersed units.⁴⁵

Technology has significantly improved our ability to project the force to extend our operational reach. Because of its reliance on Army aviation and the USAF for operational mobility and strategic lift, the air assault division has gained significantly from the latest technological revolution that has Army planners looking past the year 2010 with the Army After Next (AAN) concept. Most significant to the operational reach of the air assault division has been the extended range and lethality of the Army aviation fleet, and the strategic lift capabilities provided by the USAF.

Air assault operations are evolving to make the most of the capabilities offered by the RAH-66 Comanche and Apache Longbow and the future Improved Cargo Helicopter. Apaches could be used to keep open the airways between objective areas. Comanche's longer range allows the force to be projected farther and faster.⁴⁶ In support of air assault operations the Comanche will require three soldiers to rearm and refuel with 500 cannon rounds, 6 missiles and 217 gallons of fuel in less than 12 minutes.⁴⁷

Air assault brigades usually assault about 150 km in a single night, but by adding wing tanks on the Blackhawks and one internal tank in the improved Chinook, this range can be extended to 300 km. By taking the seats out of Blackhawks the allowable cargo load (ACL) is increased to 20 soldiers, and two brigades could air assault in one night.⁴⁸

Increases in the reach and sophistication of theater-level precision weaponry are requiring the development of new kinds of strategic maneuver platforms. Defense observers correctly point out the future vulnerabilities of Operation Desert Storm-type buildups to long-range missiles and "transparent" battle zones. As the threat of precision

weapons grows, strategic employment of joint forces in the 2010 period and beyond will seek to leapfrog coastlines and "iron mountain" supply dumps to strike from the continental United States directly at enemy vulnerabilities.⁴⁹

The air assault division has evolved from a limited tactical role in the 1950's to one that has significant operational and strategic implications. As a contingency force, its lethality and operational flexibility provides the Army a significant tool to accomplish its diverse mission requirements at all levels of war. It is the only force that has all the requirements of a power projection force. Yet, the air assault division is limited by aviation fuel and the strategic deployability of its soldiers and helicopters into theaters of operation around the world. The need for an ISB in almost all strategic deployments, strategic lift, or the aviation's self-deployment support requirements are restrictions adherent to the employment of the air assault division that require detailed planning to maximize the division's strengths.

Chapter 4: Analysis of Strategic Deployment Capabilities.

The unique versatility and strength of an air assault task force is achieved by combining the capabilities of modern rotary-wing aircraft -- speed, agility, and firepower -- with those of the other combat arms to form a tailored task force.⁵⁰ Depending on the conditions in theater, the division can strategically deploy by USAF airlift to a secure area in-country or into an intermediate staging base (ISB) outside the area of operations. Working from an ISB, the division can conduct an air assault forced entry operation.⁵¹ As a deployment option, the division can self-deploy its aviation assets to virtually any contingency location in the world, granted the self-deployment flight routes and aircraft capabilities can be supported with logistics stopover points.

Chapter 4 will analyze the strategic deployment capabilities of contingency divisions as they will exist in the year 2010. USAF strategic airlift analyzed includes: C-5 and C-17 aircraft. Army aviation assets analyzed include the AH-64, RAH-66, UH-60 and the improved cargo helicopter (ICH). Sealift as a means for deployment of heavy contingency divisions is analyzed to compare the effort and time requirements for airlift and sealift deployability.

Strategic Airlift.

A significant variable for the strategic deployability of the air assault division is the sorties required to airlift air assault task force packages into contingency operations. As a rapid deployment force, the air assault division has the capability to deploy its division ready brigade (DRB) as a contingency force package in 18 hours.⁵² This force package is

task organized to deploy worldwide with significant combat power to defeat or defend against most contingency threats, and can be readily task organized to conduct domestic humanitarian assistance operations or conduct SASOs overseas. In response to a strategic contingency deployment, the air assault division will deploy its DRF force package, an infantry battalion task force, on (54) C-17 sorties and (18) C-5 sorties. Following the DRF in 36 hours is the DRB force package, an infantry brigade (-) on (170) C-17 sorties and (65) C-5.⁵³ Composition of division force packages are as depicted in Chapter 3, Figure 3-2.

To reinforce a DRB committed in a contingency operation, an AH-64 Apache company, within 18 hours of notification, can be in the air enroute to any strategic destination where C-17 aircraft can land. The company-sized package includes eight AH-64 helicopters, 33 soldiers, and combat service support for maintenance operations. The package requires four C-17 sorties. Within 48 hours, an AH-64 battalion can be deployed. This element is combined with the initial company, and possesses a total of 24 AH-64 helicopters, 301 soldiers, and combat service support. It can be deployed on eleven additional C-17 aircraft.⁵⁴

Since getting to a theater of operation with the most combat power in the least amount of time is critical in contingency operations, air assault forces are at a distinct disadvantage when compared to the deployability of other contingency forces. Strategic deployment of the air assault division requires extensive airlift resources. In comparison with a light infantry division, an air assault division requires almost twice as many C-5 and C-17 sorties. Additionally, air assault forces cannot deploy from the continental United States

ready to fight, and thus need an intermediate staging base to prepare aviation and ground forces for the actual assault.⁵⁵

Based on the assumptions that one strategic airlift transport can complete one sortie into theater every 48 hours, and an Army allocation of USAF strategic airlift assets of 30 percent, the effort and time requirements to deploy a contingency force are calculated in Figure 4-1.⁵⁶

Figure 4-1.

Strategic Deployment Requirements.

Type Division	Type Aircraft		Division Closure Dates	
	Option A	Option B		
	C-5/C17	C-17/C5	Option A	Option B
Air Assault	161/511	436/289	C+36	C+24
Airborne	34/432	373/57	C+28	C+22
Light Infantry	39/312	272/61	C+18	C+16
Armored	878/688	512/1143	C+52	C+66
Mechanized	855/691	491/1155	C+50	C+66

Note 1: Option A calculates current C-141 sorties replaced by the 2010 C-5 fleet. Option B calculates current C-141 sorties replaced by the 2010 C-17 fleet.

Source: MTMCTEA REFERENCE 97-700-2. Logistics Handbook for Strategic Mobility Planning.⁵⁷

Air assault forces are easily configured for strategic deployment. Helicopters have engineered into their design easily removable or folding components that facilitate loading within USAF aircraft.⁵⁸ These features greatly enhance transportability of these aircraft. The mainstay of the air assault lift assets, the UH-60, is air transportable in C-130, C-5,

and C-17 aircraft. These aircraft will transport one, eight and four UH-60 helicopters respectively.⁵⁹

To complement the diminishing USAF cargo fleet is the Civil Reserve Air Fleet (CRAF). CRAF provides an important cargo and passenger airlift capability to contingency operations that require the deployment and sustainment of multiple U.S. Army divisions. The CRAF program is a voluntary civil and military partnership that uses commercial aircraft to support DOD airlift requirements during airlift emergencies. CRAF is activated in three stages: Stage I - Committed Expansion, Stage II - Airlift Emergency, and Stage III - National Emergency CRAF Activation. Once activated, response time for carriers, after mission is assigned, is 24 hours for aircraft called up for stages I and II, and 48 hours for aircraft called up for stage III. The exact number and type of aircraft in each stage varies during each CRAF contract cycle, based on airline inventory and policies.⁶⁰

Strategic Sealift.

As identified in Figure 4-1, heavy divisions are not realistically deployed solely by airlift and require analysis into the deployment by sealift. For the purpose of this study, sealift will be limited to fast sealift ship (FSS) transportation, and calculations will be based on the following assumptions. (1) The heavy division will deploy out of Fort Hood, Texas. (2) Seven days are required to transport heavy brigades to the seaport of embarkation (SPOE), and assemble FSSs. (3) Based on an FSS's capability of hauling 850 pieces of cargo (vehicles and container), a heavy brigade task force will require two FSSs for deployment.⁶¹ (4) Sea travel will require seven days. (5) Assembly and preparation for combat at the seaport of debarkation (SPOD) will require four days. Figure 4-2

illustrates the effort and time required to deploy a heavy division utilizing the FSS fleet as a means of strategic deployment.

Figure 4-2.

Heavy Division Strategic Sealift					
EVENT/ TIME	Assemble SPOE (7 Days)	FSS Load Time (2 Days) ⁶²	Sea Transport Time (7 Days)	FSS Unload Time (3 Days) ⁶³	Assemble SPOD/ Combat Ready (4 Days)
UNIT					
BDE #1	C+7	C+9	C+16	C+19	C+23
BDE #2	C+14	C+16	C+23	C+26	C+30
BDE #3	C+21	C+23	C+30	C+33	C+37
DIV					
Assets	C+28	C+30	C+37	C+40	C+44

Note 1: Division assets deployed on C+28 are those assets not deployed as CS or CSS attachments to the brigade task forces. Division headquarters elements are crossloaded within brigade allocated FSSs.

Note 2: Division troops will require approximately (37) 747 or equivalent aircraft for deployment.

Source: MTMCTEA Reference 97-700-2. Logistics Handbook for Strategic Mobility Planning.

Strategic deployment requirements are a significant constraint in planning and executing contingency operations. The nature of the crisis, simultaneous military deployments, and the number of units required to deploy are only a few factors which will determine the allocation of strategic airlift and sealift.

Aviation Self-Deployment.

Modern helicopter technology has provided the air assault division with the capability to self-deploy its aviation assets into a theater of operations. Although not a primary means of deployment, the capability to self-deploy Army aviation assets provides options

in the deployability of an air assault force in a strategic contingency scenario, and alleviates strategic airlift requirements to deploy the air assault division.

Army helicopters all have the ability to carry enough usable fuel to reach a deployable range. However, self-deployment is applicable to the deployment of aircraft only, and does not include the deployment of unit personnel or equipment.⁶⁴ Based on a C-17's allowable cargo load of (4) UH-60, (2) AH-64, and (1) ICH, self-deploying the division's lift and attack aviation battalions will reduce airlift requirements by 18, 36, and 48 aircraft respectively for a total of 102 C-17 sorties.⁶⁵ Figure 4-3 shows the maximum distance extended-range fuel systems provide the AH-64, UH-60, RAH-66 and the ICH.

Figure. 4-3

Army Aviation Self-Deployment Capabilities.

ELEMENT	AH-64	UH-60	ICH ⁶⁶	RAH-66 ⁶⁷
Range on normal fuel (nautical miles)	360	370	350	N/A
Maximum range (nautical miles) with extended fuel tanks	1,089	1,114	1,056	1,100
Average true airspeed (knots)	124	118	130	N/A
Mission time (hours)	8.5	10.3	9.8	N/A

Source: FM 1-109, Aviation Self-deployment Planning.⁶⁸

To sustain self-deployment operations, refuel and maintenance points support an aircraft's maximum fuel range as well as the endurance of the flight crews. Each refuel/maintenance point must be capable of supporting a specific "leg" of the self-deployment contingency plan.⁶⁹ At an 80 percent operational readiness rate, each AH-64

and UH-60 battalion needs about 20,000 gallons of fuel at each stopover point.

ICH units deploying 75 percent of their organic aircraft will require approximately 50,000 gallons of fuel at each stopover. Multiplying these quantities by several units including stopover points, makes it clear that fuel delivery must be planned in detail well in advance of the operation.⁷⁰

Force Modernization Effects on Strategic Deployment.

Technology is working towards reducing some of these issues with: (1) the strategic lift capabilities of the C-17 Aircraft that will deliver air assault forces to dispersed FOBs closer to their area of operation, (2) through improvements in helicopter self-deployability techniques that alleviate the requirement of USAF airlift to arrive into theater or at an ISB, and (3) the further development of the ICH and RAH-66 Comanche helicopter programs.

Deployment of the air assault division as a strategic contingency force has improved with the fielding of the USAF C-17 Globemaster III transport. The C-17 provides capabilities that allow the air assault division rapid deployment to an FOB. The C-17 was designed to fill a critical gap in military airlift capability. In rapid deployment by airlift, the MAC force structure of C-5s, KC-10s, and CRAF aircraft is restricted to operations at a limited number of major airfields. This cargo must then be transferred by ground or other air transportation to where it is needed. This intratheater movement, if by air, will be by C-130, which is capable of landing at forward, austere airstrips. But the C-130 is limited in tonnage capacity. Thus the last 100-200 miles required for intratheater movement may take longer than the original 4,000 mile strategic lift.⁷¹

The C-17 combines the best capabilities of previous airlifters into a single platform. With improved fuel efficiency, it can span strategic distances of more than 3,200 nautical miles. Its most significant feature is the ability to take off and land on unpaved airstrips less than 3,000 feet long. In comparison, the C-5 requires 5,000 feet of paved runway.⁷² The C-17's ability to land on a runway 3,000 feet long by 90 feet wide increases the number of worldwide available airfields by more than six fold.⁷³

The C-17 design includes an interior cross section similar to the C-5 for outsized cargo and the ground handling and maneuverability qualities of the C-130.⁷⁴ The C-17 did not give up strategic capability in order to gain a "residual tactical" capability; it was designed to fill a shortfall in the nation's airlift force with improved operational utility.⁷⁵

Although the C-17's payload over a range of 3,000 NM is some 25,000 lbs. less than that of the C-5, its quicker turn-around time (about an hour compared with the two to three hours required for a typical C-5 turn-around) and ability to squeeze into smaller spaces means that a C-17 operation will, in situations where parking areas are restricted, achieve a much higher cargo through-put than a C-5 airlift over a given period.⁷⁶ These capabilities enable the C-17 to strategically deploy the air assault division into dispersed FOBs to minimize the risk to the effects of WMD during the force build-up phase of a contingency operation.

The RAH-66 Comanche has several features which make it ideal to support contingency operations. It was designed to deploy quickly with minimal logistics and airlift preparation requirements. The RAH-66 folds and "kneels" to fit U.S. Air Force transports: eight in a C-5, four in a C-17 or one in a C-130. At the aerial port of debarkation (APOD), the RAH-66 can be ready to fight about twenty minutes after the

airlifter touches down.⁷⁷ Similar to the AH-64, the RAH-66 has the ability to self-deploy into a theater of operation. From the continental United States, it can be on hand to support contingency forces in Europe in 24 hours and southwest Asia in 30 hours.⁷⁸ The RAH-66 and C-17 force modernization programs provide a deployment capability that expands the options available to the contingency force commander and planner.

With a reduced requirement to build up combat power at APODs and SPODs, tactical units can land at dispersed locations on the opponent's exterior lines and converge on the field of battle. Units can converge on the decisive points and sever enemy forces from lines of communication and escape routes. With the capability of strategic dominant maneuver comes the potential for strategic surprise at the national, strategic and theater levels of war.⁷⁹ Future military operations may become strategic and operational battles of convergence executed by dispersed units of tremendous lethality and extraordinary maneuverability.⁸⁰

This chapter has identified the magnitude of the effort and time required to strategically deploy a contingency division by airlift or sealift, and analyzed the self-deployment of Army aviation assets into a theater of operation.

The analysis of aviation self-deployment identifies it as an option that continues to have significant shortcomings. Army aviation has a viable self-deployment capability, however it is not a dependable alternative to airlift because of time, weather, and enemy situation ambiguities inherent with a contingency operations. Additionally, the logistics support required to prepare and sustain self-deployment operations is demanding a significant personnel and resource effort from a division which is probably in the process of strategically deploying into the same theater.

The USAF has improved strategic airlift versatility with the fielding of the C-17 Globemaster III; however, it is unable to airlift the air assault division into a theater in less than three weeks based on an Army allocation of 30 percent strategic transports. To close the division in theater under these circumstances requires approximately 24 to 30 days, given there are no delays because of weather or aircraft maintenance requirements at the APOE or ADOD. The division's DRB is capable of rapid strategic deployment, but requires an ISB to assemble combat power before it can conduct forced entry or reinforcing operations. The DRB is task organized with an outstanding air assault capability, but in most mid- to high-intensity operations will require an augmentation force from the 3rd Infantry Division (Mechanized) to conduct combat operations. Allocation of CRAF will enhance the division's strategic deployment capabilities, but like the C-5 is restricted to major APODs which most likely will require another transportation means to move units and equipment into an ISB or FOB.

With modern FSS and CRAF a heavy contingency division has the ability to strategically deploy and build up combat power in a theater of operations in approximately 44 days. The first brigade task force arrives in theater at C+19 with the ability to conduct combat operations at C+23 with follow-on brigades arriving at seven day intervals. An advantage of sealift is a brigade's ability to close in theater as a coherent combat unit, unlike airlifted units which arrive piecemeal a company or battalion at a time. With this strategic deployment capability, a heavy division can build offensive combat power (two brigades) in a theater within thirty days. The most significant constraint on the strategic deployability of the heavy force is its dependency on the location of an SPOD in theater and the time and effort required to move the force into position on the battlefield.

Strategic deployability validates the air assault and heavy divisions as viable contingency forces. Both demonstrate the capability of quickly building combat power by air or sealift that meets the demands of most contingency scenarios. Both demonstrate limitations that will require a METT-T analysis to determine which force is appropriate for each contingency scenario. However, both are prepared to deploy in total or as brigade/battalion task forces to support a contingency commander's specific mission requirements.

Chapter 5: Sustaining the Air Assault Force.

Logistical constraints are a constant factor to the air assault force as it maintains the technological initiative that provides it the most effective capabilities. Inherent with the deployment of the air assault division and to complement the capabilities of new equipment is the requirement for a logistical system that is proactive rather than reactive, equipped, and structured to support a dynamic air assault contingency force. This chapter analyzes the logistical challenges of sustaining the air assault division in a contingency operation, and addresses the revolution in military logistics (RML) as it pertains to supporting contingency operations into the twenty-first century.

Sustaining the Force.

Significant logistical challenges of an air assault contingency operation are based essentially on the sustainability of the division's mobility and lethality. Given the large variety of weapons systems in an air assault force and the fluidity of contingency operations, fueling, arming, and fixing the force will require detailed planning, initiative and extensive resources. The capability to sustain an air assault contingency force from beginning to end will set the tempo of an operation.⁸¹

While technologically advanced ground and air vehicles provide great mobility and firepower, they also consume large quantities of fuel, ammunition and repair parts. An

air assault division consumes more ammunition and fuel per day than light or airborne divisions, but significantly less than an armor division. Figure 5-1, depicts the requirements of arming and fueling an air assault division in comparison to other U.S. Army divisions.

Figure 5-1.

Class III and V Consumption Rates

Quantity\Type unit.	Light Division	Airborne Division	Air Assault Division	Armor Division
JP 8 Gallons(000)/day	88.9	106.1	343.8	559.9
MOGAS Gallons(000) /day	17.0	29.8	34.1	53.5
Ammunition (STONS)/day	348.1	352.4	395.1	2,270

Note: Calculated using the single fuel system concept (JP 8) for ground vehicles and helicopters.
Source: Operations Logistics Planner 97.⁸²

Class III can be supplied to a theater by either strategic airlift or sealift. Airlifting class III provides the contingency force with immediate, forward delivered fuel. C-17 and C-5 transports fitted with the aerial bulk fuel delivery system (ABFDS) have the capability to transport approximately 9,000 and 10,000 gallons respectively.⁸³ However, these limited quantities are only sufficient to supply the initial phase of a contingency operation.

Strategic sealift delivers fuel to theater that is sufficient to sustain a division size force for long duration's. One Sealift Class tanker is capable of delivering 225,846 barrels (9,485,532 gallons) of fuel.⁸⁴ This equates to 15.5 days of supply (DOS) for a heavy division, and 26 DOS for an air assault division operating under the criteria outlined for

Figure 5-1. Sealift Class tankers may accompany the FSS sorties into theater, or be dispatched from regional fuel terminal port facilities.

Using Figure 5-1 to analyze the effort and time required to sustain the air assault division with class V results in the following conclusions. (1) One FSS can transport 60 days of class V into theater in 13 days, assuming seven days travel time and five days load/unload time.⁸⁵ (2) To sustain the division by airlift will require seven C-5 sorties at 62 STONs per aircraft or nine C-17 at 45 STONs per aircraft to provide one day's worth of class V.⁸⁶ Because the air assault division is a unique organization with unique capabilities and requirements, it has a logistics system that is tailored to meet its specific needs. Sustainment of the air assault division is accomplished by a combination of means aimed at maximizing resources at the critical places and times.

Aircraft class III and V distribution is conducted through two means: rapid refuel points (RRPs) and forward arming and refueling points (FARPs). RRP are established to rapidly refuel large numbers of aircraft during surge periods, such as air assaults. They are generally long duration fueling operations that are time-consuming to establish and difficult to move, especially when they are established with 10,000, 20,000, or 50,000 gallon fuel bags. Tankers with 5,000 gallon capacity and HEMTTs may also be used to store fuel at an RRP, increasing its mobility. The bulk fuel storage and distribution capability an RRP can provide through its multiple points allows the AATF to refuel a complete light or heavy serial simultaneously, minimizing ground time and enhancing the rapid buildup of combat power. They normally do not have a rearming capability, but may when augmented by attack battalion armament personnel and equipment. Although the total number of points at an RRP is METT-T dependent, an RRP of 6 light points and 4

heavy points will provide adequate support for a brigade AATF. An RRP can be established by an aviation brigade, DISCOM, or the Corps Support Group. When it is operated by more than one unit, it is known as a consolidated rapid refuel point (CRRP).

The FARP is an aircraft refuel site which is located in a tactical position forward of the division tactical assembly area (TAA), and conducts both refueling and rearming operations. FARPs are normally established by aviation battalions, which are manned and equipped to refuel and rearm aircraft under combat conditions using various types and setups. HEMTT FARPs are most effective behind the forward line of troops (FLOT) or where secure ground LOCs exist. Forward of the FLOT, jump FARPs (JFARPs), consisting of slingload 500 gallon fuel drums, pumps, and hoses, and preconfigured ammunition loads, provide refuel/rearm capability for attack and cavalry aircraft. Heavy assault FARPs consist of a CH-47 or UH-60 with an external pump to pump fuel from the aircraft's external fuel tanks. UH-60 heavy assault FARPs are easy to establish but have limited capacity, suiting them primarily to supporting the cavalry Squadron.

While operating behind the forward line of troops (FLOT) in the TAA, fuel will be throughput to the division by Corps Support Groups (CSGs) and other echelons-above-division assets. The Main Support Battalion (MSB) assists with resupply on an emergency basis. This will allow the division to stage its equipment for air assault operations. Divisional fuel handlers will operate with the CSG until required to move forward. Resupply of CRRPs behind the FLOT will normally be by ground via corps throughput (either Army or Host Nation Support).

As the division assaults forward, the Aviation Brigade will plan, equip, man, and control the locations and operations of FARPs/RRPs outside the TAA, FLB, or FOB.

The DISCOM and CSG plan, coordinate, and execute the Aviation Brigades resupply of FARPs/RRPs that are used to support condition setting and the initial air assault. They will normally be a mixture of HEMMT FARPs to the rear of the FLOT, JFARPs across the FLOT, and heavy assault FARPs as required by the tactical situation. Emplacement of all types of FARPs must be considered in combat operations.

Immediately after the initial air assault, a forward logistics base (FLB) will normally be established in the objective area. The nucleus of fuel operations in the FLB will be the FSB's class III section. Using its organic assets the FSB can operate two ground and two air refueling points for a maximum of 12 hours of operation. As the FLB expands, more points may be added or other FARPs/RRPs may be set up near the FLB. As the FLB is established, it will become the BSA for the task force. If the FLB/BSA is determined to be a staging area for future operations, it will be designated as a forward operating base (FOB) and receive additional division assets to support future operations.

As the FOB expands, and the FSB goes into PZ posture for future air assault, fuel handlers from other FSBs, the MSB, an Aviation Brigade, or CSG will echelon forward. These units will fall in on the equipment left by the FSB. The FSB takes equipment brought by these new units and either assists in expanding the operation or of preparing for future operations at a new FLB/BSA/FOB.⁸⁷

Class IX daily consumption rates for the air assault division, while almost double that of a light division, are significantly less than a mechanized division at all levels of commitment. Refer to Figure 5-4.

Figure 5-4.

Class IX Combat Forces Usage Rates (STONs/Day)

Unit	Level of Commitment		
	Light	Moderate	Heavy
Air Assault Division	8.52	11.36	17.04
Airborne Division	5.19	6.92	10.38
Light Division	3.10	4.13	6.20
Mechanized Division	32.65	43.52	65.30

Source: FM 101-10-1/2, Staff Officers Field Manual Organizational, Technical, and Logistical Data Planning Factors (Volume 2).⁸⁸

Delivery and distribution of class IX to sustain the air assault division will require approximately one C-17 sortie per day based on historical data from Operation Desert Storm.⁸⁹ However, the class IX consumption rate of the air assault division must be adjusted as the environment affects its helicopters. For example, during Operation Desert Shield aviation units experienced rapid deterioration of rotor blades due to the Saudi sand, cracked aircraft windows, and engines scheduled for 1,500 hours of operation before major overhaul were lasting only 50 hours.⁹⁰ Besides desert operations, jungle, cold weather, and mountain operations will place unique implications on aircraft maintenance which will require modifications to class IX consumption rates.⁹¹

Revolution in Military Logistics. Challenges in the Twenty-First Century.

To support the deployability and sustainment of all contingency forces the Army is revolutionizing logistics capabilities to support operations in the year 2010. The ongoing

revolution in military logistics is making it possible to transition from a Cold War Army to a strategic dominant maneuver force capable of fully executing the National Military Strategy.⁹² The RML does not stop at any one time, such as the year 2010, but rather is built with robust ideas and concepts that will incorporate the changes that the Army After Next portends for the U.S. Army.⁹³

Specifically, the RML is enhancing the contingency force capabilities in the areas of technology application and acquisition, force projection, and sustaining the force. Technology application and acquisition are moving logistics beyond its traditional limits with the initiative to make it more proactive than reactive. As a force projection, CONUS-based Army, the RML will rapidly project not only tactical units, but also the logistics systems. To accomplish this requires a lighter logistics infrastructure. Finally, in the area of sustaining the force, the RML is emphasizing the need to sustain the force, while maintaining readiness to launch forces into any operational area. Once deployed, the RML distribution based system will operate through velocity rather than mass. The total system must operate in every spectrum of involvement from peacetime through peacekeeping operations and if necessary, global engagement.⁹⁴

This chapter has analyzed sustainment of an air assault contingency force and future logistics innovations that are applicable in sustaining contingency operations in the twenty-first century. Sustaining an air assault or armor contingency force provides unique challenges to the logistic planner. Time and effort required for sustainment are not simply quantities of supplies, but also the how, what, when, where of sustaining the force. Especially true for contingency operations is the accuracy of forecasting supplies based on

the operations METT-T, particularly of which the mission, terrain, and size of the force will have the greatest implications for the logistics planner.

The Analysis of class III, V, and IX reflects the complexity associated with sustaining a force as diverse as the air assault division or as logistically intensive as an armor division. Comparison of the two divisions clearly demonstrates the sustainability advantages of the air assault division based on the principle that "least is best". To sustain an armor division in comparison to an air assault division requires additional strategic lift. Under the conditions of this study the armor division required: 40 percent more to transport class III, 600 percent more to transport class V, and 300 percent more to transport class IX.

However, as stated earlier, sustaining a force goes beyond numbers. These are starting points to developing a sustainment system. The air assault division and armor divisions have tactical sustainment systems in place that focus on the uniqueness of sustaining each force. The critical sustainment link for contingency operations is transporting supplies into theater. Both divisions require a buildup of supplies to conduct combat operations. With modernization's to the C-17, C-5 and FSS fleets' the air assault and armor divisions are becoming more sustainable to conduct contingency operations as the versatility, capabilities and speed of theater support continues to improve.

Chapter 6: Conclusions.

Future contingency operations will require a force not only capable of deploying as a fighting force, but able to sustain itself for extended operations, be strategically, operationally and tactically mobile, and equipped with the lethality to defeat a wide variety of threats. This monograph examined the validity of the air assault division's employment as a strategic contingency force.

To understand the feasibility of employing the air assault division as a strategic contingency force this monograph analyzed the division in detail, to include its mission/purpose, strategic deployability through airlift, aviation self-deployment and DRB deployment requirements. Operational capabilities were analyzed that considered current capabilities and presented force modernization programs that were being fielded or would complete fielding prior to the year 2010. Force modernization programs were presented as solutions to the air assault division's limitations, or as combat multipliers.

Strategic deployability of the air assault division was analyzed and compared to the deployability of light and heavy contingency forces. Lastly examined was the division's ability to sustain itself with critical class III, V, and IX supplies, and the significance the RML will have on sustaining the future force.

This monograph concludes that the air assault division is a credible strategic contingency force with significant operational reach. It is a force limited by its ability to strategically deploy, mass its combat power, and requirements of class III, V, and IX supplies. However, these limitations are continuing to decline in significance as the U.S.

military continues to improve the strategic deployment capabilities of the C-17, C-5, and FSS fleets, continued modernization of the helicopter fleet, and by incorporating the RML innovations in the logistics system.

Operational Capabilities.

The air assault division is becoming more deployable, lethal, and sustainable with the fielding of force modernization projects such as the C-17, Longbow, ICH, and Comanche helicopters, and as innovations of RML come on-line to enhance the force. The air assault division has the capability of accomplishing mission requirements at all levels of war. It is the only U.S. Army force which meets all requirements of a power projection force:

arrive rapidly from CONUS, prepared to enter by force, and ready to exploit tactical success. Yet it is dependent on its helicopters for tactical and operational mobility, and requires an ISB in a theater to prepare for combat operations.

Strategic Deployment.

Strategic deployability is a critical factor in any contingency operation. The air assault division can rapidly deploy its DRB in 18 hours; however, it requires an ISB to assemble combat power before it can conduct forced entry or reinforcing operations. Due to the requirements to airlift the division, it cannot mass as quickly as a light or airborne division because of its strategic airlift requirements. To reduce airlift requirements, the division does have the capability to self-deploy its aviation assets; however, this is not a realistic option because of time, distance and logistics requirements. In comparison to a heavy division, the air assault division's most significant advantage is its ability to rapidly deploy its DRB. Both divisions require significant strategic lift to close in theater, however, both are prepared to deploy as a division or a brigade task force in response to specific mission

requirements. The strategic deployment capability and force projection versatility of air assault and heavy forces makes them a viable contingency force in mid to high-intensity scenarios.

Sustaining the Force.

Significant logistical challenges of an air assault contingency operation are based essentially of the sustainability of the division's mobility and lethality. Although the air assault division requires significantly less class III, V, and IX to sustain its force than a armor division, force modernization is making this less an issue. Operational and tactical logistical systems have proven successful by Operation Desert Storm and Operation Joint Endeavor. With the improvements of strategic air and sealift, strategic logistics are capable of sustaining the most robust contingency force for extended operations.

Contingency operations will continue to present unique challenges to the Army planner well into the twenty-first century. The issues which decide the success of contingency operations today will continue in the year 2010. Although refined and modernized, the significance of capabilities, strategic deployment and sustaining the force will remain critical in selecting the right contingency force. If we remain true to the lessons learned from Operations Just Cause, Desert Storm, Restore Hope, and Joint Endeavor, future contingency forces will continue to be combined arms operations, where strengths of light, airborne, air assault, mechanized, and armor divisions are combined to accomplish the endstate of the operation.

Monograph Endnotes.

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